

REMARKS

Claims 1-12 have been amended. New claim 13 has been added. The Abstract has been shortened. Reexamination and reconsideration are respectfully requested.

In response to the Office Action, Applicants have amended the Abstract to delete the reference numbers and to limit it to less than 150 words. Applicants wish to thank the Examiner for noting the objection.

Additionally, Applicants have amended dependent claims 2 and 4-12 to reference "the" update method and "the" search data update system, respectively, as these claims depend from independent claims 1 and 3, respectively.

In view of the above, Applicants submit the objections should be withdrawn.

In the Office Action, independent claim 1 and dependent claim 2 were rejected as being anticipated by Tanaka et al. (US 2002/0013658 A1). In view of the clarifying amendments made with respect to claims 1 and 2 and the following remarks, Applicants respectively traverse this rejection.

Applicants' invention is directed toward an update method for updating search data used in a navigation apparatus. Data constituted with search tree data and a plurality of sets of substance data specified based upon the search tree data are provided as search data prior to an update. The method provides a

set of substance data, which has search-related information and is different from data specified based upon the search tree data, separately from the data constituted with the search tree data and the plurality of sets of substance data specified based upon the search tree data, when updating a set of substance data in the search data or adding a set of substance data to the search data. A substance data search is executed by using both the search tree data of the search data prior to an update and the search-related information of the provided set of substance data.

As can be seen, for example, from the exemplary embodiment of Figure 4, the update data (Figures 4a – 4c) includes search-related information and is different from data specified based upon search tree data. In other words, the update data are not transmitted in a format that will include a search tree and substance data (see paragraph [0033]; see also paragraph [0032]).

The method, as recited in claim 1, executes a substance data search by using both the search tree data of the search data prior to an update and the search-related information of the provided set of substance data. As can be seen, for example, from the exemplary flow chart of Figure 6, a first comparison (step S22) is made in a root cell table of route tree constituting search data main body, and a second comparison (step S23) is made with indices in update data.

Applicants' invention thus provides an update method for updating search data used in a navigation apparatus that has several advantages. In particular,

for example, only updated substance data need be provided to the navigation apparatus instead of updating the entire search data main body constituted with the search tree and the substance data specified based on the search tree. This minimizes the volume of update data while allowing a user to utilize the latest search data. It also lowers the communication costs as only a smaller volume of data need be transmitted (see paragraph [0057]).

In contrast, Tanaka does not disclose “providing a set of substance data, which has search-related information and is different from data specified based upon the search tree data, separately from the data constituted with the search tree data and the plurality of sets of substance data specified based upon the search tree data, when updating a set of substance data in the search data or adding a set of substance data to the search data” and “executing a substance data search by using both the search tree data of the search data prior to an update and the search-related information of the provided set of substance data” in accordance with Applicants’ claim 1.

As an initial matter, Tanaka relates to a method for registering locations that are input by a user (see Abstract, second sentence). In particular, Tanaka recognizes that a navigation system often allows the user to essentially pre-register his/her home location as well as friends’ locations or other often used locations (see paragraph [0004]). Tanaka recognizes, however, that such user input locations cannot always be easily searched by the navigation system. Thus,

Tanaka provides a method by which registered locations that are input by users can be made the subject of an alphabet-based search or a facility search (see paragraphs [0007] and [0008]). In that regard, Tanaka's navigation system stores the data of a user input new location into a rewritable memory that additionally stores the original data of the locations (see Abstract and paragraph [0009]).

In Tanaka's first embodiment, the original search list is stored in the form of a search tree as shown in Figure 2 (see paragraph [0031]). A user may then register a new location in accordance with the operation shown in Figure 3, in which case the search list of Figure 2 is updated by updating the search tree of Figure 2 as can be seen in Figure 4 (see paragraphs [0032] and [0033]). Thus, even Tanaka's method, which is directed toward registering user input locations, operates to update "the search tree in the search list" (see paragraph [0033]) in contrast to Applicants' claim language.

Tanaka's operation is thus vastly different, and directed toward a different object, than Applicants' invention, which provides a set of substance data separately from the data constituted with the search tree data when updating a set of substance data in the search data or adding a set of substance data to the search data. Moreover, Applicants' claimed method executes a substance data search by using both the search tree data of the search data prior to an update and the search-related information of the provided set of substance data. In

contrast, Tanaka merely executes its alphabet-based search using the updated search tree in the search list (see paragraph [0035]).

Tanaka, in his second embodiment, only discloses “specifically, as shown in Figure 7b, a new search tree is formed in the new search list in addition to the original search tree shown in Figure 7a” (see paragraphs [0038] and [0039]). Thus, hereto where Tanaka registers the user input location in a search list separate from the original search list, Tanaka again utilizes a search tree formed in the new search list. Of course, Applicants’ claimed method provides a set of substance data separately from the data constituted with the search tree data and the plurality of sets of substance data specified based upon the search tree data. In that regard, the provided set of substance data has search-related information and is different from data specified based upon the search tree data.

Finally, Tanaka’s third and fourth embodiments fail to disclose providing data constituted with search tree data and a plurality of sets of substance data. Here, Tanaka provides a search list as shown, for example, in Figure 10 that does not utilize search tree data. Thus, these embodiments cannot meet Applicants’ claimed limitations of providing data constituted with search tree data and a plurality of sets of substance data specified based upon the search tree data, as search data prior to an update. Rather, Tanaka’s new user-registered location provides substance data that is not different from the data prior to the update. Moreover, Tanaka merely executes a facility search by

searching the original and new search lists (paragraph [0051]), neither of which use "the search tree data of the search data prior to an update" as recited in Applicants' claim 1.

In view of the foregoing, Applicants respectfully submit amended claim 1 is patentable over Tanaka.

Regarding Applicants' dependent claim 2, the method stores the provided set of substance data having search-related information as update data in the navigation apparatus separately from the search tree data and the plurality of sets of substance data specified based upon the search tree data, without updating the search tree data or creating new search tree data. Hereto, Tanaka fails to disclose or suggest such a feature. Hence, Applicants submit claim 2 is also patentable over Tanaka.

In the Office Action, independent claim 3 was rejected as being obvious over Tanaka et al. in view of Miyahara (US 2003/0028316). For reasons similar to those with respect to claim 1, Applicants respectfully traverse this rejection.

Applicants' independent claim 3 recites a search data update system. Update data are provided in units of individual sets of substance data, include attached thereto information to be used in a search in correspondence to each set of substance data, and are different from data specified based upon the search tree data. The apparatus, upon obtaining the update data, stores the update data into a second storage device separately from the first search data without

updating the search tree data or creating new search tree data. A search device of the navigation apparatus executes a substance data search by using both the search tree data of the first search data stored in the first storage device and the information to be used in a search attached to each set of substance data of the update data stored in the second storage device, in correspondence to input of character for search.

As noted above, Tanaka fails to disclose these claimed features. Contrary to claim 3, Tanaka's navigation apparatus does update the search tree data with the new user-location information as can be seen from a comparison of Figures 2 (original search tree) and 4 (updated search tree). Moreover, Tanaka does not execute a substance data search by using both the search tree data stored in the first storage device and information to be used in a search attached to each set of substance data of the update data stored in the second storage device, in correspondence to input of character for search.

Moreover, Miyahara merely discloses allowing for partial updates of map data and does not render obvious Applicants' invention as recited in claim 3. Hence, Applicants submit independent claim 3 is patentable over Tanaka in view of Miyahara.

Regarding Applicants' dependent claims 4-12, hereto additional features are recited that are not obvious over Tanaka in view of Miyahara and either Saito or Hanon.

In particular, Applicants' dependent claims 6 and 7 perform operations once a number of sets of update data having been obtained become equal to or greater than a predetermined value. An audio output or a display output notifies a user when that occurs (claim 6) or the update data obtaining device obtains a new version of first search data and stores the new version of first search data thus obtained into the first storage device (claim 7). This feature is not disclosed or suggested in Miyahara. Rather, in Miyahara, it is the server SV which determines the need for an update of map data based on unit codes and data dates. This is not at all comparable to providing an output to the user or obtaining a new version of first search data once a number of sets of update data having been obtained becomes equal to or greater than a predetermined value. Rather, Miyahara's server SV determines the type of update to be carried out (see paragraph [0098]).

In view of the foregoing, Applicants respectfully submit claims 6 and 7 are separately patentable over the prior art of record.

Finally, Applicants have added a new independent claim 13 reciting a navigation apparatus capable of updating search data. The apparatus includes a first storage unit at which first search data constituted with search tree data and a plurality of sets of substance data each specified based upon the search tree data are stored. A second storage unit is provided at which update data, obtained by an update data obtaining device, are stored separately from the first

search data. The update data obtaining device obtains update data used to update or add to substance data of the search data. The update data are different from data specified based upon the search tree data, and have search-related information in each set of substance data. A search device of the navigation apparatus executes a substance data search by using both the first search data stored in the first storage unit and the update data stored in the second storage unit.

In contrast, neither Tanaka, nor the other art of record, disclose such a navigation apparatus utilizing first and second storage units in which a search device executes a substance data search by using both the first search data stored in the first storage unit and the update data stored in the second storage unit. Nor does the prior art disclose an update data obtaining device to obtain update data that are different from data specified based upon search tree data, and have search-related information in each set of substance data.

In view of the foregoing, Applicants respectfully submit claim 13 is also patentable over the art of record.

Accordingly, Applicants respectfully submit claims 1-13 are now in condition for allowance. An early notice to that effect is solicited.

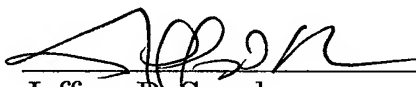
If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

Serial No. 10/586,534
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Attorney Docket No. 029267.58056US

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #029267.58056US).

Respectfully submitted,

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